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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,427	03/16/2004	Zhicheng Tang	TI-36982	2050

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EXAMINER	
OVEISSI, DAVID M	

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/801,427	Backer Firmin	
	Examiner	Art Unit	
	David Oveissi	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Novemebr 15 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8,10-13,15 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8,10-13,15 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *March 16 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim1and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. For claims 1 and 12 the standard length **M** is vague and indefinite. Also, the abbreviated length **m** is vague and indefinite.

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of claims under 35 U.S.C. 103(a), examiner presumes that subject matter of various claims was commonly owned at time any inventions covered rein were made absent any evidence to contrary. Applicant is advised of obligation under 37 CFR 1.56 to point out inventor and invention dates of each claim that was not commonly owned at time a later invention was made in order for examiner to consider applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining scope and contents of prior art.
2. Ascertaining differences between prior art and claims at issue.
3. Resolving level of ordinary skill in pertinent art.
4. Considering objective evidence present in application indicating obviousness or nonobviousness.

6. Following is a quotation of 35 U.S.C. 103(a) which forms basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though invention is not identically disclosed or described as set forth in section 102 of this title, if differences between subject matter sought to be patented and prior art are such that subject matter as a whole would have been obvious at time invention was made to a person having ordinary skill in art to which said subject matter pertains. Patentability shall not be negatived by manner in which invention was made.

Claims **1-6, 10, 12-13,** and **17** are rejected under 35 U.S.C. 103 (a) as being unpatentable over **Agarwal (US 6,963,570 B1),** in view of **Oyamada et al. (US 6,535,526 B1).**

For claims **1** and **12 Agarwal** teaches the limitation a communication method, based on a communications standard that defines a cell format with a standard header of a standard length **M** (see Fig.1 A &B "5 OCTET HEADER"), for communicating cells from a sender via a communications medium to a receiver, the method comprising:

forming an abbreviated header of length **m<M** *(see Fig.1 A &B "5 OCTET HEADER" and Fig. 3 "2 OCTET HEADER")*, the forming comprising:

forming, within the abbreviated header, a virtual channel identifier (VCID) field

that has a VCID field length V16 bits sufficient to specify a number of virtual channels encountered in a given communications scenario *(see column 5 lines 29-32 and Fig. 11 B "VCID")*;

forming a PTI (Payload Type Identifier) field as defined in ATM *(see Fig.1 A & B "PTI")*;

forming a CLP (Cell Loss Priority) field as defined in ATM *(see Fig.1 A & B "CLP")*;

Following limitations are taught by **Oyamada** from the same field of endeavor.

forming a DIB (Data Identification Bit) field that takes on a first value to specify that a cell payload is data, and a second value to specify that the cell payload is management information *(see Fig.14 "b3")*;

forming an MCT (Management Cell Type) field that forms a specification taken from a group including:

a present cell is a channel setup notification cell or a channel close notification cell;

the present cell is an F5 0AM cell *(see column 14 line 7-11and column 13 lines 61-66)* ;

the present cell is an F4 0AM cell, from end-to-end*(see column 14 line 7-11and column 13 lines 61-66)*; and

the present cell is an F4 0AM cell, in the present link (sequent) only*(see column 14 line 7-11and column 13 lines 61-66)*; and

forming an ERROR CONTROL field; and

sending a cell, including the abbreviated header, over the communications medium *(see Fig. 10 "HEC")*. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to use various field of **Oyamada** in the **Agarwal** ATM header compression. In addition, the first two limitation are well taught by **Agarwal**, see Fig.3 "2 OCTETS FRAME HEADER"). Also, notice that he has divided the compressed header into 4 fields with different functionality. Therefore, in my opinion there is no novelty in the applicant invention.

For claim **2** and **13 Agarwal** teaches a method, wherein:

the communications standard is asynchronous transfer mode (ATM); and M = 5 octets *(see Fig.1 A& B "unit 1110")*.

For claim **3 Agarwal** teaches a method, wherein: m = 2 octets *(see Fig.3 "FRAME HEADER = 2 OCTETS")*.

For claim **4 Agarwal** teaches a method, further comprising:

receiving the cell that was sent over the communications medium; and unpacking information from the abbreviated header of length m *(See Fig. 7 "HEADER DECOPRESS")*.

For claim **5 Agarwal** teaches a method, further comprising:

using the unpacked information from the abbreviated header of length m so as to form a standard header of the standard length M *(see abstract and Fig. 8 B flowchart and paragraph 15 lines 15-20)*; and

forming a standard cell including the standard header of the standard length M *(see abstract and Fig. 8 B flowchart and paragraph 15 lines 15-20)*.

For claim **6 Agarwal** teaches a method, further comprising:

sending the standard cell of the standard length M, further downstream from the receiver*(see abstract and Fig. 8 B flowchart and paragraph 15 lines 15-20)*.

For claims **10** and **17 Agarwal** teaches a method wherein:

the PTI field has a PTI length of three bits *(see Fig. 3 "1260")*;

the CLP field has a CLP length of one bit *(see Fig. 3 "1260")*;

the DIB field has a DIB length of one bit *(see Fig. 3 "1260")*;

the MCT field has an MCT length of two bits *(see Fig. 3 "1260")*; and

the ERROR CONTROL field has a EC length of four bits *(see Fig. 3 "1260")*.

7. Claims **8, 11, and 15** are reject under 35 U.S.C. 103(a) as being unpatentable over **Agarwal** in view of **Bornemisza et al. (US 7,154,895 B1)** and **Turner et al. (US 7,072,296 B2).**

For claims **8, 11, and 15 Agarwal** teaches all the subject matter of the claimed invention with exception of a system/apparatus/method, wherein the given communications scenario involves communicating the cells in a digital subscriber line **(DSL)** network; and **V<= 5** bits. However, **Bornemisza** from the same field of endeavor teaches a system/apparatus/method for ATM header compression for **DSL** links (see abstract) except teaching **V<= 5** bits limitation specifically. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use teaching of **Bornemisza** in the ATM compression for **DSL** in the method and method for adaptive loss-less compression of cell/packet headers**.** This is possible because of the adaptive nature of **Agarwal** ATM compression method allows this combination to be possible**.** The motivation for this combination is to make the compression method suitable for DSL, which has bandwidth limitation specially for downloading, or uploading programs that need substantial amount of bandwidth. Neither **Agarwal** nor **Bornemisza** teach **V <=5** limitation. However, **Turner** from the same field of endeavor teaches this limitation (see paragraph 22 lines 18-22). In addition, **Turner** explains the use of ATM header reduction in **HDSL** (see Paragraph 2 line 61), which is a variation of DSL. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use **5-bit VCI** field of ATM header result of **Turner** compressed header in the method and apparatus for adaptive loss-less compression of cell/packet headers of **Agarwal**. In order to do this one can extract some bits of the VCI field to reduce the header as **Turner** explains it-as matter of fact the VCI can be reduced to two bits as it has been disclosed by **Turner** (see paragraph 22 lines 18-22). The motivation for this

combination is further compression of ATM header that results in more efficient and effective use of bandwidth.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure **Chen et al. (6,111,871), Le Dantec (US 6,876,814 B1),** and **Sakaguchi (US 6,289,020 B1).**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Oveissi whose telephone number is (571) 270-3127. The examiner can normally be reached on Monday to Friday 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Backer Firmin can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.O

FIRMIN BACKER
SUPERVISORY PATENT EXAMINER